

REMARKS

Applicant respectfully requests reconsideration of this application. No claims have been amended or canceled. Therefore, claims 13-22 and 27-31 are currently pending in the application.

Claim Rejections - 35 U.S.C. §102(b)

Claims 13, 15-17, 27, and 29-31 are rejected under 35 U.S.C. §102(b) as being anticipated by Nishio (US005521732A). Applicant respectfully submits that independent claims 13 and 27 are not anticipated by the cited reference because Nishio does not disclose all of the features of the claims. Claim 13 recites:

An apparatus comprising:

a wavelength switch module (WSM);

an optical transceiver, detachably coupled to the WSM, to send a first optical signal to the WSM and **to detect a second optical signal received from the WSM after sending the first optical signal, wherein the optical transceiver comprises an encoder to put an identification into the first optical signal to send with the first optical signal to the WSM;** and

a set of one or more processors coupled to the WSM to automatically determine whether the second optical signal corresponds to the first optical signal in response to the identification and an interrupt from each of the WSM and the optical transceiver.

(Emphasis added)

Nishio discloses an optical wavelength selection control system in an optical network including an optical center node device and a plurality of terminal devices each comprised of a work station and an optical interface. (Nishio, Abstract). The optical center node in Nishio includes a control circuit, a plurality of optical switches, a plurality

of optical dividers, a plurality of tunable wavelength filters, a plurality of optical combiners, and a plurality of optical star couplers. (Nishio, col. 3, lines 43-48, and Figure 3). The electrical signal from a work station is converted at its respective optical interface to an optical packet signal of a predetermined wavelength λ . (Nishio, col. 3, lines 48-51). The converted optical packet signal consists of a header portion and a data portion, with the header portion carrying destination address information and data length information. (Nishio, col. 5, lines 49-51, and Figure 4). After the converted optical packet signal is transmitted through an optical divider, the header portion of the optical packet signal is transmitted to the control circuit and the data portion of the optical packet signal is transmitted to an optical switch through one of the optical star couplers and one of the optical dividers. (Nishio, col. 5, lines 55-67; col. 3, line 58 to col. 4, line 24; Figures 3 and 4). The optical switch, in response to a control signal from the control circuit, sends the data portion of the optical packet signal, via one of the tunable wavelength filters, to a corresponding optical combiner of a work station to which the data portion of the optical packet signal is destined. (Nishio, col. 3, lines 19-32; and Figure 3). An optical combiner combines a data portion of an optical packet signal from an optical switch with ACK and NACK optical signals generated by the control circuit, and sends the combined optical signal to a work station through its respective optical interface. (Nishio, col. 3, lines 44-52; and Figure 3).

Regarding claim 13, Applicant respectfully submits that Nishio fails to disclose the feature of “an optical transceiver, to detect a second optical signal received from the WSM after sending the first optical signal,” as recited in claim 1. The Examiner states that the feature of “a second optical signal received from the WSM” is disclosed by Nishio in that “optical interface 314 receives an ACK signal via waveguide 324 from

WSM 300.” (Office Action, 06/10/2009, page 2, emphasis added). Applicant respectfully disagrees with the characterization of the cited reference for the following reasons.

First, the component 300 disclosed by Nishio is an optical node, instead of a wavelength switch module (WSM), as the Office Action alleged, although the optical node includes a plurality of optical switches. (Nishio, col. 3, lines 43-48, and Figure 3). Second, the ACK signal, which is alleged by the Office Action as disclosing the feature of “a second signal,” is generated by the control circuit of the optical node, not by any of the optical switches of the optical node. As stated above, Nishio’s work station receives an optical signal consisting of the data portion of an optical signal from another work station, via one of the optical switches, and the ACK/NACK signal generated by the control circuit, and it does not receive any optical signal directly from any of the optical switches in the optical node taught by Nishio. Thus, the ACK/NACK signal generated by the control circuit in Nishio does not disclose the feature of the “second optical signal” in claim 13. As discussed above, the data portion of the combined optical signal received by the work station is sent from another work station, and it has nothing to do with the optical signal sent earlier by the receiving work station.

Next, Applicant respectfully submits that Nishio fails to disclose the feature of putting “an identification into the first optical signal to send with the first optical signal to the WSM” and the feature of “a set of one or more processors coupled to the WSM to automatically determine whether the second optical signal corresponds to the first optical signal in response to the identification...,” as recited in claim 13. The Examiner states that Nishio discloses an identification by his teaching of the optical header, and the Examiner further states that Nishio discloses the above mentioned features because

Nishio teaches that the “control circuit 370 selects an optical packet signal from one of the work stations and determines the corresponding ACK signal or NACK signal in response to their headers in the event of a collision.” (Office Action, 06/10/2009, page 2 and page 3). Applicant respectfully disagrees with the Examiner’s interpretation of the cited reference.

Applicant respectfully submits that the optical header taught by Nishio is not equivalent to the feature of “identification” in claim 13. First of all, as mentioned above, an optical header is sent to a control circuit inside the optical node in Nishio, rather than to an optical switch. As Nishio described in his patent, the header portion of the optical packet signal outputted from a work station “is processed at the control circuit.” (Nishio, col. 5, lines 55-58). In contrast, claim 13 recites the feature of putting “an identification into the first optical signal to send with the first optical signal to the WSM.” Second, the optical header inside an optical signal sent by a work station has nothing to do with another optical signal received by this work station. As discussed above, the optical signal received by one work station consists of the data portion of an optical signal sent from another work station and the ACK/NACK signal sent from the control circuit. The data portion of the received optical signal has nothing to do with the optical header sent earlier by this receiving work station. As to the ACK/NACK signal, although the control circuit sends the ACK/NACK signal to a work station based on the information on the optical header sent earlier by this work station, as discussed above, the ACK/NACK signal is not equivalent to the “second optical signal” stated in claim 13, because the ACK/NACK signal is not received from any of the optical switches of the optical node, instead, it is received from the control circuit of the optical node. In contrast, claim 13 recites the feature of “a second optical signal received from the WSM” and the feature of

“the second optical signal corresponds to the first optical signal in response to the identification....”

Furthermore, Nishio also fails to disclose the feature of “an interrupt from each of the WSM and the optical transceiver,” as recited in claim 13. The Office Action fails to point out where Nishio describes the feature of “an interrupt from each of the WSM and the optical transceiver” and Applicant cannot find anywhere in Nishio that describes the above-mentioned interrupt features.

Therefore, Nishio fails to disclose each and every feature of claim 13. Accordingly, Applicant respectfully submits that Nishio does not anticipate claim 13. Withdrawal of the rejection is respectfully requested.

Regarding to claim 27, for reasons similar to the ones for claim 13, Nishio fails to teach the features of “sending the first optical signal with the identification to the WSM from the optical transceiver” and “causing a set of one or more processors coupled to the WSM to automatically determine whether the second optical signal corresponds to the first optical signal in response to the identification and an interrupt from each of the WSM and the optical transceiver,” as recited in claim 27. Accordingly, claim 27 is not anticipated by Nishio.

Given that claims 15-17 and 29-31 directly or indirectly depend from independent claims 1 and 27, respectively, for at least the reasons stated for claims 1 and 27, Applicant respectfully submits that claims 15-17 and 29-31 are not anticipated by Nishio.

Accordingly, Applicant respectfully requests that the rejections to claims 13, 15-17, 27, and 29-31 be withdrawn.

Claim Rejections - 35 U.S.C. §103(a)

Claims 18 and 20-22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Nishio (US005521732A) in view of Flauaus et al. (US 20050108444A1). Applicant respectfully submits that the combination of the cited references does not teach or suggest all of the features of the claims.

Regarding claim 18, for reasons similar to the ones stated for claim 13, Nishio fails to teach the feature of detecting “a second optical signal received from the WSM . . . , wherein the optical transceiver comprises an encoder to put an identification into the first optical signal to send with the first optical signal to the WSM” and the feature that “a second optical signal corresponds to the first optical signal in response to the identification and an interrupt from each of the WSM and the optical transceiver,” as recited in claim 18.

Flauaus teaches a system for detecting, monitoring, reporting, and managing congestion in a fabric at the port and fabric levels, and Flauaus’s system includes multi-port switches in the fabric with port controllers that collect port traffic statistics. (Flauaus, Abstract). Flauaus fails to cure the deficiencies of Nishio because Flauaus fails to teach the above-mentioned features that Nishio fails to disclose.

Therefore, Nishio and Flauaus, either alone or in combination, fail to teach or suggest all of the features of claim 18. Accordingly, Applicant respectfully submits that claim 18 is patentable over the cited references.

Given that claims 20-22 directly or indirectly depend from independent claim 18, for at least the reasons stated for claim 18, Applicant respectfully submits that claims 20-22 are patentable over cited references.

Accordingly, Applicant respectfully requests that the rejections of claims 18 and 20-22 under 35 U.S.C. §103(a) be withdrawn.

Claims 14 and 28 are rejected under 35 U.S.C. §103(a) as being unpatentable over Nishio (US005521732A), in view of Chbat et al. (US006810214B2). Applicant respectfully submits that claims 14 and 28 are patentable over the combination of cited references because the combination does not teach or suggest all of the features of the claims.

Claim 14 directly depends from independent claim 13 and incorporates all of the features of claim 13. As discussed above, Nishio fails to teach or suggest all of the features of the claim 13. In particular, Nishio do not teach or suggest the feature of “an optical transceiver, … to detect a second optical signal received from the WSM after sending the first optical signal, wherein the optical transceiver comprises an encoder to put an identification into the first optical signal to send with the first optical signal to the WSM” and the feature of “a set of one or more processors coupled to the WSM to automatically determine whether the second optical signal corresponds to the first optical signal in response to the identification and an interrupt from each of the WSM and the optical transceiver,” as recited in claim 13. Chbat teaches a system operable to reduce degradation of an optical signal to noise ratio. (Chbat, Abstract). Even though Chbat teaches that the filters in his system can be replaced with variable attenuators, Chbat does not cure the above-mentioned deficiencies of Nishio.

Claim 28 directly depends from independent claim 27 and incorporates all of the features of claim 27. As discussed above, Nishio fails to teach the feature of “sending the first optical signal with the identification to the WSM from the optical transceiver” and

“causing a set of one or more processors coupled to the WSM to automatically determine whether the second optical signal corresponds to the first optical signal in response to the identification and an interrupt from each of the WSM and the optical transceiver,” as recited in claim 27. As discussed above, although Chbat discusses the use of variable attenuators, Chbat does not cure the above-mentioned deficiencies of Nishio.

Because neither Nishio nor Chbat, alone or in combination, teaches all features set forth in claims 14 and 28, claims 14 and 28 are patentable over Nishio in view of Chbat. Accordingly, Applicant requests that rejection of claims 14 and 28 under 35 U.S.C. §103(a) be withdrawn.

Claim 19 is rejected under 35 U.S.C. §103(a) as being unpatentable over Nishio (US005521732A) in view of Flauaus et al. (US 20050108444A1), and further in view of Chbat et al. (US006810214B2). Applicant respectfully submits that claim 19 is patentable over the combination of cited references because the combination does not teach or suggest all of the features of the claim.

Claim 19 directly depends from independent claim 18 and incorporates all of the features of claim 18. As discussed above, Nishio and Flauaus, either alone or in combination, fails to teach the feature of detecting “a second optical signal received from the WSM . . . , wherein the optical transceiver comprises an encoder to put an identification into the first optical signal to send with the first optical signal to the WSM” and the feature that “a second optical signal corresponds to the first optical signal in response to the identification and an interrupt from each of the WSM and the optical transceiver,” as recited in claim 18. As discussed above, although Chbat discusses the

use of variable attenuators in his system, Chbat does not cure the above-mentioned deficiencies of Nishio.

Because none of Nishio, Flauaus, and Chbat, alone or in combination, teaches all features set forth in claim 19, claim 19 is patentable over Nishio in view of Flauaus and Chbat. Accordingly, Applicant requests that rejection of claim 19 under 35 U.S.C. §103(a) be withdrawn.

CONCLUSION

Applicant respectfully submits that the rejections have been overcome by the remarks, and that the pending claims are in condition for allowance. Accordingly, Applicant respectfully requests the rejections be withdrawn and the pending claims be allowed.

Pursuant to 37 C.F.R. §1.136(a)(3), Applicants hereby request and authorize the U.S. Patent and Trademark Office to (1) treat any concurrent or future reply that requires a petition for extension of time as incorporating a petition for extension of time for the appropriate length of time and (2) charge all required fees, including extension of time fees and fees under 37 C.F.R. 1.16 and 1.17, to Deposit Account No. 02-2666.

Respectfully submitted,
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